aspects of any case. To determine in any particular case just what rate of progress the disease may pursue if left untreated, or what degree of immunity from some of the annoying symptoms we can promise the patient by nephrectomy, is not easy. In ward hospital cases the immediate operation appears to be the only alternative. For those who can afford climatic changes and rest a careful preliminary observation of the existing conditions of the urinary tracts should precede their travels, and the same examination, when at all indicated, should be repeated in order to keep posted regarding such an advance of the disease as to call for operation.

Orchitis and Epididymitis in Typhoid Fever.—KINNICUTT (*New York Medical Record*, May 25, 1901) reports two cases of this rare sequel or complication of typhoid fever. Eshner, in 1898, after a careful review of the literature, was able to collect only 44 cases, and Do collected the statistics of complications occurring in 14,738 cases of typhoid fever without finding a single case of orchitis and epididymitis. In Osler's series of 829 cases of typhoid fever, orchitis or epididymitis was observed only in 2 instances, both unattended with suppuration, and in the 889 cases treated by the author and his colleagues in the Presbyterian Hospital the lesion was noted only in the two cases which the author reports. It is probable that the frequency of this complication is greater than the statistics indicate. Aside from cases which presumab'y have not been reported, the fact that in the 44 cases collected by Eshner, 5 occurred after the second week of convalescence—one of these, as late as the ninth week—suggests the presumption that cases occur in which the true origin of the orchitis is not suspected. The first case, aged twenty-four years, was admitted to the hospital on the seventh day of his illness. The infection was of a moderately mild type, the maximum temperature not exceeding 104.5° F. He was treated by the cold bath, and the illness was in every way uneventful. The morning and evening temperatures were normal on the twenty-third day. There was a marked increase in the leucocytes on the fifteenth day, which lasted for three days, and then gradually disappeared. The urine was slightly albuminous, but at no time were casts found. The catheter was not used, and there was at no time any urethral discharge. There was no history nor evidence of gonorrhœal infection in the past. On the fifth day of normal temperature the patient complained of pain in the right groin and the temperature rose to 101°. Examination the next day showed that the cord was enlarged, hard, and sensitive in the inguinal canal. The following day the swelling had reached the external ring, and in the course of the succeeding twenty-four hours the morbid process had extended to the epididymis and testicle. These became markedly swollen and very sensitive. There was no effusion into the tunica vaginalis. Almost simultaneous with the swelling of the cord, phlebitis of the long saphenous vein developed. The swelling of the cord and testicle gradually subsided, and on the sixteenth day after the first appearance of the symptoms the only evidence consisted of a trifling induration and sensitiveness of the epididymis, sensitiveness along the course of the saphenous vein, and moderate swelling of the leg and thigh. When examined ten weeks later all physical signs of a lesion of cord, epididymis, and testicle were absent. The second case was thirty-four years of age, and developed orchitis and epididymitis at the end of the febrile period. Examination showed the seminal vesicles to be normal, the prostate enlarged but not tender, and some fluctuation over the testicle. Aspiration at the point of fluctuation was made, and a small quantity of pus obtained; this contained the typhoid bacillus in pure culture. The swelling and sensitiveness of the cord, testicle, and epididymis have only partially subsided, and there is still a sinus leading to the body of the testicle through which minute shreds of necrotic tissue are occasionally extruded.

In the fifty-three cases of testicular inflammation occurring in the course or during the convalescence of typhoid fever, which comprise the literature of the subject, suppuration developed in thirteen. Bacteriological examination demonstrated the presence of Eberth's bacillus in pure culture in the pus from six of the cases. In a single instance pyogenic cocci alone were found. The remaining six cases were reported prior to or about the date of Eberth's discovery of the specific bacillus of typhoid fever.

In one non-suppurative case Eberth's bacillus was found in pure culture in the sero-sanguinolent fluid obtained from an aseptic puncture of the testicle.

In view of the bacteriological findings, the usual origin of orchitic lesions in typhoid fever cannot be doubted. Apparently only exceptionally is the infection due to other micro-organisms than Eberth's bacillus. It remains to consider the probable channels of infection.

It is probable that the bacilli reach the testicle both by the blood stream and from the urethra through the intermediary of the vas deferens. That Eberth's bacillus in great numbers is found in the urine in a large percentage of cases of typhoid fever is now well known.

It may be of interest to analyze briefly Eshner's forty-four cases and the nine additional ones which the author is able to add, of orchitis and epididymitis occurring in the course or during the convalescence of typhoid fever, comprising all cases found in the literature of the subject which give sufficient detail to be of value.

Sixteen cases developed during the course of the fever. Of these, one occurred during the second week, six during the third week, two during the fourth week, one during the fifth week, one during the sixth week, two during the seventh week, two "at defervescence," and one at a time not definitely stated. Thirty-five cases developed during convalescence. Of these, eleven developed during the first week, seven during the second week, three during the third week, one during the fourth week, one during the fifth week, one during the sixth week, eleven at a time not definitely stated. In two cases the date of development is not given. In two cases the inflammation affected both sides, in forty-five it was unilateral, and in six cases no statement is made of its localization. Of the unilateral cases, twenty-two were on the right side, twenty-one on the left, and in the remaining two it is not stated on which side. The epididymis only was involved in seven cases; the testicle only in sixteen cases; both epididymis and testicle in twenty-six cases; and in the remaining four a distinction is not made between the testis proper and the epididymis. There was effusion into the tunica vaginalis in nine cases; in ten, it is noted that such effusion was absent; and in thirty-four no statement is made on this point.

Suppuration occurred in thirteen cases, partial necrosis in five cases, complete necrosis in two cases, and death in two cases, but without apparent relation to the complication. Recovery with residual nodules in the epididymis is noted in seventeen cases; the subsequent histories of these cases would be of interest. The bacteriological examinations of the pus in the suppurating cases have been given earlier in this paper.

A study of these cases justifies the following conclusions: 1. Epididymitis or orchitis occurring in the course or during the convalescence of typhoid fever is a rare lesion and is of typhoidal origin. 2. Only very exceptionally it is due to secondary microbic infection. 3. It develops at a late period in the disease or during convalescence. 4. The lesion, although as a rule unilateral, may be bilateral, and involves either the epididymis or testicle or both, and not infrequently the cord. 5. Effusion into the tunica vaginalis is rare. 6. Termination most often is by resolution. 7. Suppuration occurs in 25 per cent. of all cases. 8. Localized necrosis and extrusion of testicular tissue is not uncommon. 9. Exceptionally there is destruction of the entire testicular structures. 10. Atrophy of the testicle occurs, but is a rare sequence. 11. The lesion gives rise to little constitutional disturbance. 12. Death as a direct result of the lesion has not been noted.

Notes on 206 Operations for Stone.—ADAMS (*British Medical Journal*, May 25, 1901) states that the operation of choice is lithotrity unless one of the following contraindications prevents: In boys (1) when there is marked cystitis, lithotomy drains the bladder and cures both diseases; (2) when there is much difficulty in passing instruments; (3) when the stone is too large or hard for the necessarily small lithotrite; (4) when there are indications of advanced kidney disease or great debility, the shock of the cutting operation seems less severe, probably because it is briefer. In men (1) when the instruments cannot be passed; (2) when the stone is too large or cannot be grasped. The author has never found a stone too hard. A former operation often renders the introduction of instruments difficult. Lithotrity was successful in the smallest boys. Forty-eight cases were in boys under ten years of age. Only one death occurred in a boy, aged three and one-half years, whose bladder was full of calculi, weighing in all seven drachms. Fifteen of these cases were in children under three years of age, and all did well. Three of the thirty-six cases of lithotomy and three of the 161 cases of lithotrity died. The author concludes with this brief table of cases: With calculi extracted through the meatus, 4; urethral calculi extracted by external urethrotomy, 2; vesical calculi removed by lithotrity (males, 153; females, 8), 161; vesical calculi removed by perineal lithotomy, 36.

The Surgery of Gastric Ulcer.—ANDREWS (*Chicago Medical Recorder*, May, 1901) states in conclusion: (1) Gastric ulcer is a surgical disease; (2) perforating ulcer should be treated by laparotomy as early as possible; (3) bleeding gastric ulcer should be treated by operation after resisting medical treatment; (4) gastric ulcers produce and are also caused by pyloric obstruction, and this calls for operation. Many obscure and obstinate stomach troubles are caused by this cicatricial obstruction, and can be cured very safely by surgical intervention.